Monster Invasion!

A funky little tried and tested project idea …'off the shelf' ready for you to adopt!

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In this short article we share with you a funky little ready-to-use project, where Nicola and Katie, two qualified design and technology teachers, encourage their Year 7 students to create 'junky' monsters, made using recycled materials.

Textronics

Designed by Nicola Lees, whilst working in a large school in London, the 'junky monster' project has been tried and tested successfully in three schools in England, with over 500 children in Year 7 successfully completing the scheme of work. At present the project is being delivered at Nicola's current school, Marsden Heights Community College and also by her former colleague Katie Holland, who currently works at Dallam School in Cumbria.

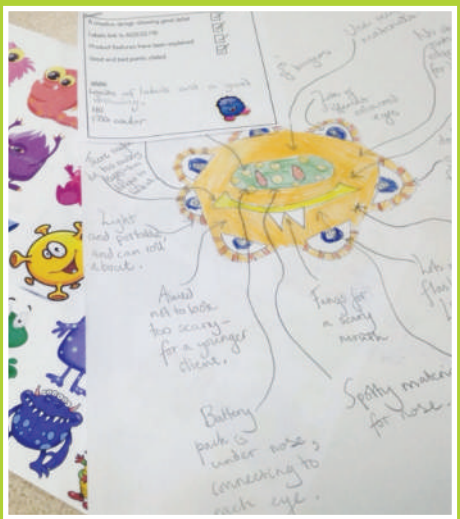
Using innovative technological textiles, in this project textiles meets electronics, which we like to call 'textronics'.

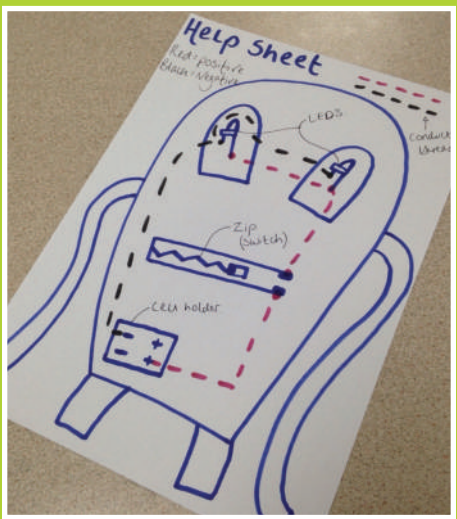
The central theme is sustainability, and as part of the project the children have to source their own recycled materials, which also include other components, such as the zip, where possible. As Nicola explains: "I designed this project in response to the new curriculum, and both Katie and I use it with our students in Year 7, during their first year with us in high school".

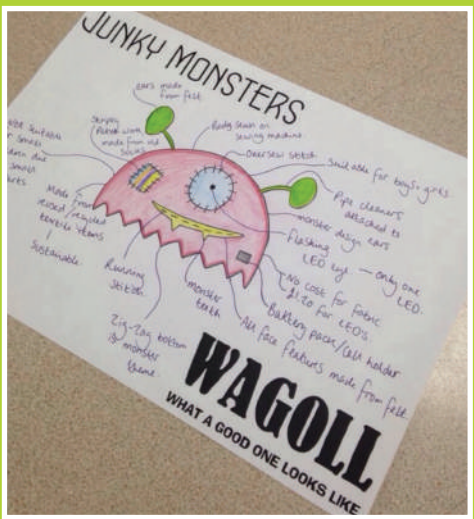
In terms of meeting the demands of the new design and technology curriculum for England and Wales (which came into force in September 2014), this new project meets the 'new technologies' strand of the curriculum extremely well. Katie goes on to say "… the transition from primary school is very important, and when they first come to us we need to grab the children's enthusiasm straight away, but with a project where everyone can achieve, as until that first lesson we are never quite sure how much design and technology they have done before".

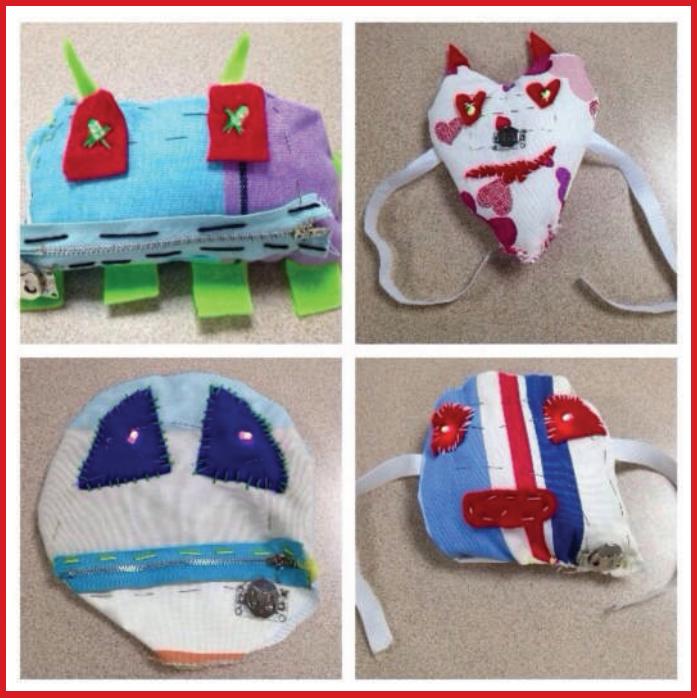
A first project

In this, the first project at a new school, Nicola and Katie have deliberately avoided extensive use of CAD/CAM, preferring to establish the students' base line skills particularly in terms of their eye hand co-ordination and practical ability. That isn't to say though that this project isn't designed to stretch and









challenge the students. In their work they use conductive thread to connect the cell holder and their LEDs to make their circuit, and ingeniously the metal zip is the switch, that activates the circuit, turning it on and off.

From the start the students are asked to consider their client, and within the research section of the task they conduct simple surveys and questionnaires. Following analysis of the data they generate their own real client profile, which they adhere to in generating their specification, design ideas and sourcing their construction materials.

Supporting STEM

However Nicola and Katie are mindful of equality and inclusion and ensure differentiated worksheets and outcomes are available to support those students who may not yet be able to generate their own design criteria or use more advance techniques within the circuitry.

In addition to sustainability, during the project both Nicola and Katie discuss the scientific and functional properties of a range of textile material, which allows them to dip in and out of Science, Technology, Engineering and Mathematics (STEM). Both are building a bank of resources to help inspire and engage the children, which include investigating the properties of various fabrics and fibres, as well as the integration of electronic components in textiles.

Outcomes

The project has been a huge success, and is equally appealing to both boys and girls, but one of the best things about working on the same project in two different schools, as Katie explains, has been the potential for collaborative assessment and further development of the project: “We can compare our group outcomes. Our schools are in different areas but we use technology, including email and Twitter, to share images of the students’ work and resources we generate. This process of external moderation helps us to assess student progress really effectively and share good practice”.

Both Nicola and Katie regularly post updates of their students’ work to promote and share good practice and you can follow and contact both through their teacher twitter profiles which can be found at: @MissLeesDT and @MissHolland_DT.